



*FEMP works to reduce the cost and environmental impact of the Federal government by advancing energy efficiency and water conservation, promoting the use of distributed and renewable energy, and improving utility management decisions at Federal sites.*

## **Deployment of Distributed Energy Resources: Sources of Financial Assistance and Information**

*September 2002*

Financial assistance to Federal agencies is available from several sources to help reduce the cost of installing Distributed Energy Resources (DER) at their facilities. FEMP has undertaken this effort to identify sources of funding that may be available to Federal agencies like yours for the implementation of DER and CHP (combined heat and power) projects. This document has been designed to briefly summarize the potential funding sources and provide you, the user, with a quick link to the web address where more detailed information can be found.

In summary, three types of funding sources may be available for Federal DER and CHP projects: DOE support, state programs, and utility programs. Although Federal support for energy technologies is aimed primarily at research and development, some financial support is becoming available for DER deployment. When states have funding programs, they are typically at a higher dollar level than the more limited Federal programs. Some state public service commissions mandate that investor-owned utilities sponsor incentives for DER, energy efficiency, and renewable energy. Other utilities voluntarily offer these incentives to their customers as a contribution to demand control.

### **Financial Assistance**

Several sources of funding may be available for Federal DER projects in FY 2003. This section outlines a few of the probable options.

#### **UPDATE: U.S. Department of Energy Fuel Cell Solicitation**

The Department of Energy has announced its upcoming fuel cell solicitation. The solicitation is expected to be issued in mid-October 2002. The solicitation is aimed at industry cost-shared applications, not at Federal agency projects. However, in a portion of the solicitation (concerning a field test of a back-up fuel cell system), at least one partner of a team is required to be a host site. This represents an opportunity for a Federal agency to partner with an industry applicant on an innovative fuel cell project.

The Federal Register Notice announcing the forthcoming solicitation is available on the web at:

[http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2002\\_register&docid=02-24079-filed.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2002_register&docid=02-24079-filed.pdf)

#### **UPDATE: Distributed Generation Grants in California**

A small grant program for solar water heating, battery backup and selected DG systems is authorized until January 1, 2006, to the extent funds are appropriated in the annual Budget Act. The State Budget for Fiscal Year 2002/2003 did not provide funding for the Solar Energy and Distributed Generation Grant Program for FY03. At this time, the California Energy Commission is not accepting applications for funding under this grant incentive program. The Commission staff is continuing to process approved reservations from the Program's previous solicitations (encompassing applications that were received on or before June 28, 2002).

This funding program was developed pursuant to Senate Bill 1345, as codified in Public Resources Code sections 25619 and 25620.10, and provides grants to California residents to help offset the cost of purchasing

and installing new solar energy and distributed generation systems. Information on the program and application forms and instructions for possible future calls for projects are available for download at: <http://www.consumerenergycenter.org/solaranddg/about.html>. It is anticipated that a similar program will be available in FY 2003.

### **System Benefit Funds (SBF)**

As some states restructured their electric utility industries, 22 states have created pockets of dollars funded by electric customers. These programs help support certain energy policy goals, such as renewable energy development, energy efficiency incentives, energy research and development, and support for low-income customers. The charge to ratepayers varies by state (ranging from .5% to 4%), averaging about 3% of the customer's electric bill. States have the option of creating these funding sources without restructuring their electric power industry (Wisconsin is an example). Depending upon the specific design in each state, these dollars are administered either by utilities, non-profit organizations, or state agencies. Information on each state funding program is available at <http://utilityrestructuring.femp.doe.gov>. According to the American Council for Energy Efficient Economy <http://www.aceee.org>, the amount of state funds available in the U.S. totals \$1.697 billion. The emphasis on SBF allocation appears to be shifting somewhat towards peak reduction. An overview on SBF is contained at the following website: <http://www.state.hi.us/dbedt/ert/symposium/brown/brown.html>

Two states in particular, California and New York, have large SBF programs.

?? For **California** information, see the following sites:

FEMP site: [http://www.eren.doe.gov/femp/resources/dir\\_caupdates.html](http://www.eren.doe.gov/femp/resources/dir_caupdates.html)

California Energy Commission site: <http://www.energy.ca.gov>

California Energy Commission DER site: <http://38.144.192.166/distgen/links/links.html>

California Public Utilities Commission site: <http://www.consumerenergycenter.org/solaranddg/documents.html>.

?? For **New York** information, see the New York State Energy Research and Development Authority:

[NYSERDA - New York Energy Smart Programs](http://www.nyserda.org/rddopps.html). NYSERDA offers Program Opportunity Notices through its website at <http://www.nyserda.org/rddopps.html>

Since state laws, rules, and programs are subject to change, energy managers are encouraged to regularly check the current status of state SBF policy and financial opportunities flowing from the SBF to support DER projects. A fast way to accomplish this is to visit the following DOE website: [http://www.eren.doe.gov/state\\_energy/states.cfm](http://www.eren.doe.gov/state_energy/states.cfm).

### **Financing DER and CHP Projects**

Are you unable to secure agency appropriated funding for your DER or CHP project? Agencies have already begun to finance CHP and DER projects through energy savings performance contracts (ESPCs), utility energy service contracts (UESCs), or other financing vehicles. To learn more about these alternative financing vehicles and how FEMP can assist, see <http://www.eren.doe.gov/femp/financealt.html>.

**“Financing Distributed Generation”** is an 11-page report produced by Dr. Andy Walker of the National Renewable Energy Laboratory's FEMP Program. The paper discusses several mechanisms for financing DER projects. E-mail a request for the “Conference Paper for the Association of Energy Engineers’ 2001 Annual Meeting” to [pamela\\_lee@nrel.gov](mailto:pamela_lee@nrel.gov).

## Other Regulatory and Funding Information

In addition to the information here, it is also recommended that Federal energy managers view the “**Database for State Incentives for Renewable Energy**,” located at <http://www.dcs.ncsu.edu/solar/dsire/finframe.html>. This web site, which lists recent updates to state renewable support programs, is managed by the Interstate Renewable Energy Council, funded by the U.S. Department of Energy's Office of Power Technologies and managed by the North Carolina Solar Center.

### Combined Heat and Power Projects

Through its **ADD CHP** program (Accelerated Development and Deployment of CHP), FEMP is fielding requests for help from agencies interested in CHP. The following ADD CHP program services and offerings may be of assistance.

Is CHP right for your facility? A **free CHP screening service** for Federal sites is now available from FEMP. To learn more, go to [http://www.eren.doe.gov/femp/techassist/der\\_resources.html](http://www.eren.doe.gov/femp/techassist/der_resources.html).

**Technical assistance** will be provided to three motivated Federal facilities in California to develop investment grade **feasibility studies for CHP projects**. This special assistance is funded through a DOE-FEMP award to the California Energy Commission. Interested sites should contact the CEC contractor, Energy Nexus Group, for an application packet: Keith Davidson, phone (760) 710-1712 or [kdavidson@energynexusgroup.com](mailto:kdavidson@energynexusgroup.com). Applications are due October 15.

A recent FEMP **market assessment** indicates that CHP could be successfully applied in 9% of large federal facilities, in projects that would have an average simple payback of 7 years. “CHP Potential at Federal Sites,” September 2002, encapsulates the information in FEMP’s *Analysis of CHP Potential at Federal Sites*. Both documents are available in pdf under the CHP area at <http://www.ornl.gov/femp/index.html>

A paper prepared for the October 2002 World Energy Efficiency Congress discusses issues affecting CHP deployment, the strategy to expedite CHP projects, and progress to date. E-mail a request for the Association of Energy Engineers Conference paper to [sherrodmj@ornl.gov](mailto:sherrodmj@ornl.gov)

### Wind Projects

The American Wind Energy Association (AWEA) in March 2001 produced an “**Inventory of State Incentives for Wind Energy in the U.S.**” The inventory provides a state-by-state survey, with information about the local wind resource and about financial, economic, and regulatory incentives for wind energy in each state. See: <http://www.awea.org/policy/index.html#State Policies>. A new feature is a state-by-state list of wind energy application incentives at <http://www.awea.org/pubs/inventory.html>

### Private Sector Guidebooks

Private companies prepare guidebooks of funding sources and incentives for DER. Two useful reports have been produced:

- (1) Information about EFI Consulting Services’ report available for \$395 is located at: [http://www.efinc.com/guidebook\\_facts.asp](http://www.efinc.com/guidebook_facts.asp).
- (2) Free DER information from Energy Info Source is located at: [http://www.energyinfosource.com/dg/dg\\_links.cfm](http://www.energyinfosource.com/dg/dg_links.cfm)

FEMP does not endorse private products, and FEMP recognizes that other companies may offer similar reports. The omission of other reports is not intended to endorse the two reports that have been referenced.

### **Additional Information**

FEMP's DER How-To Guide for Federal Energy Managers

Implementing a successful DER project involves several steps. A FEMP publication, entitled "*Using Distributed Energy Resources: A How-To Guide For Federal Facility Managers*" addresses the process for getting a DER system up and running at your site. This document was published in June 2002 and is available on the FEMP DER web site: <http://www.eren.doe.gov/femp/techassist/pdf/31570.pdf>.

The "**Renewable Energy & Distributed Generation Guidebook, A Developers' Guide to Regulations, Policies, and Programs that Affect Renewable Energy and Distributed Generations Facilities in Massachusetts**", April 2001 is an excellent overview of the issues such as siting that must be addressed in DER applications. It is available in pdf form at [http://www.state.ma.us/doer/pub\\_info/guidebook.pdf](http://www.state.ma.us/doer/pub_info/guidebook.pdf)

## **Links for More Information**

The following web sites have additional information on DER.

### **Federal websites**

Department of Energy – Federal Energy Management Program (FEMP)  
<http://www.eren.doe.gov/femp>

Department of Energy – Distributed Energy Resources Program  
<http://www.eren.doe.gov/der>

Department of Energy – Regional Office Representatives  
<http://www.eren.doe.gov/rso.html>

FEMP Distributed Energy Resources Program  
[http://www.eren.doe.gov/femp/techassist/der\\_resources.html](http://www.eren.doe.gov/femp/techassist/der_resources.html)

FEMP CHP Program Overview  
[http://www.eren.doe.gov/femp/techassist/pdf/chp\\_prog\\_overview.pdf](http://www.eren.doe.gov/femp/techassist/pdf/chp_prog_overview.pdf)

FEMP Design Assistance Program  
<http://www.eren.doe.gov/femp/techassist/designassist.html>

FEMP Energy Saver Showcase Program  
[http://www.eren.doe.gov/femp/prodtech/get\\_recogniz.html](http://www.eren.doe.gov/femp/prodtech/get_recogniz.html)

FEMP SAVEnergy Program  
<http://www.eren.doe.gov/femp/techassist/savenergyprog.html>

FEMP Renewable Energy Resources  
<http://www.eren.doe.gov/femp/techassist/renewenergy.html>

Energy Information Administration  
<http://www.eia.doe.gov>

Federal Incentives for Commercial Solar Applications  
[http://www.mdv-seia.org/federal\\_incentives.htm](http://www.mdv-seia.org/federal_incentives.htm)

FEMP *Guide to Greening of Federal Facilities*  
<http://www.eren.doe.gov/femp/greenfed>

FEMP *Handbook for Promoting Behavior-Based Energy Efficiency in Military Housing*  
<http://www.eren.doe.gov/femp/yhttp/strategies.html>

Department of Energy – Office of Power Technologies  
<http://www.eren.doe.gov/power/>

U.S. Environmental Protection Agency  
<http://www.epa.gov>

## **Industry and other websites**

Alliance to Save Energy

<http://www.ase.org/>

American Wind Energy Association

<http://www.awea.org>

Association Council for Energy Efficient Economy

<http://www.aceee.org>

Distributed Power Coalition of America

<http://www.distributed-generation.com/dpca/>

Edison Electric Institute

<http://www.eei.org>

Electricity Storage Association

<http://www.electricitystorage.org/>

Energy-efficient Product Information

<http://www.energystar.gov>

Fuel Cell Developers

<http://216.51.18.233/fcdevel.htm>

Institute of Electrical and Electronics Engineers

<http://www.ieee.org>

National Association of Regulatory Utility  
Commissioners

<http://www.naruc.org>

Online Fuel Cell Information Center

<http://www.fuelcells.org>

Public Technology, Inc.

<http://pti.nw.dc.us/index.html>

Solar Buzz

<http://www.solarbuzz.com>

Solar Energy Industries Association

<http://www.seia.org>

United States Fuel Cell Council

<http://www.usfcc.com>